A Level Computer Science

Exam Style Questions

Unit 1.3.4

Web Technologies

Part 2: JavaScript

Name		Date	

Score	Percentage	Grade
/ 19		

Question 1

The Big Brains exam board has produced a website that allows students to access revision videos. All pages in the site contain the following tag in the head section.

```
<link href="themes/standard.css" rel="stylesheet" type="text/css">
```

The exam board wants to limit access to those students with a school email account (i.e. one ending .sch.uk). When students sign up JavaScript is used to check that the email address they have entered is from a school account. The address is checked again when it reaches the server before login details are sent to the address.

Explain why it is important to check the email address with JavaScript and again when it reaches the server.

[3]

Question 2

A theatre has a website showing its productions and allowing people to make bookings. Part of the site is shown below. The words 'Book tickets' link to the page 'bookings.html'.

Upcoming productions:
1. Macbeth
2. Blood Brothers
3. An Inspector Calls

Book tickets

The theatre offers price reductions on Tuesdays and Wednesdays.

The theatre manager wants some text on the website to display "Midweek Special – tickets £15 tonight" on Tuesdays and Wednesdays, and "Tickets £20 tonight" on all other nights.

The website coders will use a div tag with the id 'prices' to do this. The Javascript code to change the contents of the div tag has been started below. The variable dayCode holds a number representing the current day of the week (0 for Sunday, 1 for Monday, 2 for Tuesday and so on).

Complete the Javascript code below so the correct message is displayed in a div tag with the id 'prices'.

```
var date = new Date();
var dayCode = date.getDay();
//0 is Sunday, 1 Monday, 2 Tuesday etc
var priceText="";




                                                    = priceText;
```

[4]

Question 3

a) Describe what is meant by the term JavaScript.

```



```

[2]

b) Explain why it is usually the case that JavaScript is interpreted rather than compiled

```



```

[2]

Question 4

The following JavaScript has been found to crash certain web browsers.

```
Line        Code
01          var total = "";
02          for (var j = 0; j < 200000; j++)
03          {
04                  total = total + j.toString();
05                  history.pushState(0, 0, total);
06          }
```

j.toString() converts j to a string. It is the JavaScript equivalent to str(j).

Complete the table below.

Line	Effect of Code	Marks
01		2
02		1
03	███████████████████████████████	
04		1
05	Pushes total onto a stack that holds the browser's history	
06	███████████████████████████████	

[4]

4

Question 5

An electricity company is looking at ways of getting meter readings from its customers. It releases an application for smartphones which allows users to submit their meter reading (a 6 digit number).

JavaScript is used to check that a reasonable value is being entered before a meter reading is sent to a server. When the user enters a meter reading number, the function validateReading is called. If the number entered is a valid number between 1 and 999999 inclusive, it returns true otherwise it returns false.

You will need to use the JavaScript function isNaN() standing for "is not a number". This returns true if the value it is given is not a number and false if it is.

isNaN(computer4) returns true
isNaN(203) returns false

Complete the function

```
function validateReading(reading)
{




}
```

[4]